

XLVII.—*Brief Descriptions of new Thysanoptera*.—VIII.  
By RICHARD S. BAGNALL, F.L.S.

Suborder TEREBRANTIA.

Family ÆLOTHRIPIDÆ.

Subfamily OROTHRIPINÆ.

*Orothrips propinquus*, sp. n.

♀.—Very like *O. australis*, Bagn., but stouter and larger (1·8 mm. long as against 1·5 mm.) and also darker in coloration. The head is shorter than the prothorax; the maxillary palpi are distinctly 8-jointed, whilst the antennal joints 3 and 4 are practically subequal, the relative lengths of joints 3 to 9 being as follows:—

*O. propinquus*, sp. n., 108 : 102 : 51 : 39 : 28 : 20 : 15.

*O. australis*, Bagn., 104 : 82 : 52 : 32 : 24 : 18 : 12.

*O. tenuicornis*, sp. n., 165 : 126 : 66 : 48 : 50 : 30 : 19.

All legs dark grey-brown; fore-tibiæ and tarsi a shade lighter—yellowish-grey-brown. Colour of antennæ as in *O. australis*. Fore-wings broader than in *O. australis*, with the brown markings across middle and tip occupying only about 0·20 and 0·15 of the total length, the comparative extent of areas being as follows:—

	<i>propinquus</i> .		<i>australis</i> .		<i>tenuicornis</i> .	
	Fore-margin.	Hind-margin.	Fore-margin.	Hind-margin.	Fore-margin.	Hind-margin.
Clear . . . .	9·0	8·0	5·0	4·5	6·0	6·0
Dark . . . .	3·5	5·5	5·5	6·0	6·5	6·0
Clear . . . .	5·0	3·0	2·0	2·5	3·5	3·0
Dark . . . .	2·5	3·5	3·5	3·0	3·0	4·0

Comparative length . 20

16

19

Setæ on veins of fore-wings minute.

*Type*. Hope Department of Zoology, University Museum, Oxford.

*Hab*. AUSTRALIA, Creswick, Victoria; on sweet pea, ♀ s only, 17. i. 15 (*R. Kelly*).

*Orothrips tenuicornis*, sp. n.

♀.—Near *O. propinquus*, colour of abdomen lighter, and apical abdominal bristles shorter and more slender. Antennæ more slender and the third joint long, clear lemon-yellow.

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Relative lengths of antennal joints and of the areas of fore-wing (which latter approximate *australis* more than *propinquus*) as shown in tables under description of *O. propinquus*. Maxillary palpi 7-jointed.

Setæ on veins of fore-wings minute.

*Type.* Hope Department of Zoology, University Museum, Oxford.

*Hab.* AUSTRALIA, Healesville, Victoria; 3 ♀ s from flowers of *Erythraea australis*, December 1913 (*A. E. Shaw and R. Kelly*).

### Family Thripidæ.

#### *Pseudothrips achætus*, sp. n.

♀.—Length 1·1 to 1·2 mm.

Chestnut-brown; fore-legs yellow, femora tinged with grey-brown and tibiæ lightly with grey; intermediate and hind legs brown shaded with grey, tibiæ yellowish distally; all tarsi yellowish. Antennæ with joint 1 light grey-brown, 2 concolorous with head, 3 yellowish-brown, 4–5 yellowish-brown to grey-brown and 6 to 8 grey-brown to brown. Fore-wing yellowish-brown, a shade lighter at base.

Head transverse, about 0·6 as long as broad; eyes large, not bulging, somewhat coarsely faceted, pilose; ocelli large; no post-ocular or interocellar bristles. Antennæ longer and more slender than in *parvus*, Bagn., about 2·3 times the length of the head; relative lengths of joints approximately as follows:—7 : 12 : 17 (including stem) : 15 : 13 : 17½ : 3 : 4.

Prothorax scarcely longer than the head, and about 0·6 as long as broad; hind margin with a series of moderately stout setæ, but no prominent bristles at hind angles. Wings pointed at apex; both veins of fore-wing regularly set with setæ.

Setæ at apex of abdomen stouter than in *P. parvus*, a pair of short curved dorsal setæ on 9, and posterior margin of tergite 8 not fringed.

♂.—Smaller, lighter, all legs yellowish marked with brown; sternites apparently without transparent areas.

Easily separated from *P. parvus*, Bagn., by the dark colour of body, the comparatively shorter head, longer and more slender antennæ, and the absence of prothoracic bristles.

*Type.* Hope Department of Zoology, University Museum, Oxford.

*Hab.* S. AUSTRALIA, Mt. Lofty Range, Adelaide; amongst a tube of thrips from flowers of *Acacia myrtifolia* and *Epachris impressa*, Aug. 9, 1914 (*E. B. Poulton*), Reg. 41.

Genus *PHYSOTHRIPS*, Karny.

a. *seticollis* group.

*Physothrips setipennis*, sp. n.

This species is very closely related to the Western Australian species, *Physothrips seticollis* (Bagn.). The antennæ are brown except joint 3 which is clear yellow, and the base of 4 yellowish.

Head as long as or slightly longer than the prothorax. Antennæ about 2.25 times the length of the head, longer than in *seticollis*; relative lengths of joints as follows:—12 : 16 : 27 (with stem) : 26 : 15 : 22 : 3 : 4.

Prothorax with the bristles at hind angles (which are exceptionally slender and light in colour in *seticollis*) somewhat stout and dark, about 0.65 the length of prothorax; surface somewhat closely and irregularly set with minute setæ. In *seticollis* these setæ are regularly disposed (including three widely-seated pairs down the centre), stouter and about twice the length.

Apical abdominal bristles distinctly stouter and darker; ninth tergite with a pair of rather short dorsal bristles, moderately widely separated and the posterior margin of the eighth tergite with a close and moderately long microscopic fringe.

Upper vein of fore-wing regularly set with setæ for the whole length as in *seticollis*.

*Type.* Hope Department of Zoology, University Museum, Oxford.

*Hab.* AUSTRALIA, Healesville, Victoria; on cultivated white briar, 25. i. 14 (*R. Kelly*).

b. ? group.

*Physothrips flavidus*, sp. n.

♀.—Exactly as in *Thrips flavidus*, sp. n., but having the antennal style 2-segmented.

In this case the type is distinctly of the genus *Thrips*, and closely allied to *T. flavus*, Schr., and this as well as *Physothrips albipes* are named in the genus *Physothrips* as well as

in *Thrips* to avoid confusion by other workers who may receive only one or other of the two forms. Further material may enable us to write upon this curious phase, so far only noticed in Japanese material.

*Type.* Hope Department of Zoology, University Museum, Oxford.

*Hab.* JAPAN, Kobe; 1 ♀ with *T. flavidus*, sp. n., June 1915 (*J. E. A. Lewis*).

c. *Pallipennis* group.

*Physothrips pallipes*, sp. n.

♀.—Length 1·1–1·3 mm.

Head and thorax brown lightly tinged with grey, abdomen black-brown. Antennal joints 1 grey-brown, 2 brown, 3 clear yellow, 4 to 8 brown, with 4 yellowish at extreme base and 5 inclined to be lighter at base. Legs yellow, the fore-femora lightly and the intermediate and hind femora more strongly shaded with grey-brown. Outer margin of the fore and intermediate tibiae shaded with grey-brown, and the hind tibiae with grey in some specimens. Fore-wings dark smoky-grey, basal fourth light grey.

Head about 0·65 as long as broad, broadest across cheeks which are gently arched; eyes large, coarsely faceted, pilose. Ocelli large, anterior one protected by a pair of rather short setae. Antennae about 2·5 times as long as the head; joints 3 and 4 fusiform; relative lengths of joints as follows:—18 : 32 : 48 : 45 : 30 : 42 : 5 : 5.

Prothorax about 1·2 times as long as the head, about 0·7 as long as broad; surface sparingly setose; hind margin depressed; bristles at posterior angles stout, rather short, not much more than 0·4 the length of the prothorax. Setae on fore-wings rather long; three widely spaced setae in distal half of upper vein; lower vein with a series of 15–18 and costa with about 30.

Apical abdominal bristles moderately long, a short dorsal pair on segment 9; posterior margin of tergite 8 with a short irregular fringe.

Easily separated from *P. vulgatissimus* (*pallipennis*) by the coloration of body, legs, and wings.

*Type.* Hope Department of Zoology, University Museum, Oxford.

*Hab.* JAPAN, Kobe Harada ; on chrysanthemum, 15. xi. 15, Reg. 128 and 129 ; Kobe, vi. 15, Reg. 126 (*J. E. A. Lewis*).

*Physothrips albipes*, sp. n.

♀.—Exactly the same as *Thrips albipes*, Bagn., but with the antennal style 2-segmented. Somewhat closely related to *P. pallipes*, sp. n.

*Type.* Hope Department of Zoology, University Museum, Oxford.

*Hab.* JAPAN, with *Thrips albipes*, Bagn., Okinawa, Luchu Isl., on nasturtium, v. 13 ; Kobe, vii. 13 (*J. E. A. Lewis*).

*Dendrothrips sexmaculatus*, sp. n.

♀.—Length 0·6 to 0·7 mm.

Like *D. degeeri*, Uz., but smaller, approaching *D. saltatrix*, Uz., in size.

Head, prothorax, pterothorax, and abdominal segments 1, and 7 to 9 dark chestnut-brown ; abdominal segment 10 lighter, 2 and 3 grey-brown, 3 posteriorly and 4 to 6 light yellow to greyish-yellow, the latter three segments each with a pair of dark brown spots. Wings dark grey with the distal fifth (0·2) white or clear. Legs brown to grey-brown, hind tibiae inclined to be lighter ; all tarsi yellowish.

Surface of head near base irregularly striate, inclined towards reticulation ; prothorax sparingly and minutely setose. Antennae about 2·5 times the length of the head. Segment 1 light grey-brown, short ; 2 dark chestnut-brown, globular, bigger and much broader than any of the others ; 3 and 4 yellowish, with the slightest tinge of grey ; 5 greyish-yellow shading to grey distally ; 6 to 8 grey-brown ; 3 and 4 subequal, relative lengths of segments 4 to 8 approximately as follows :—10 : 11 : 11 : 4 : 4 ;—6 narrowing to style and narrower than 5, not divided.

Separated from *D. degeeri*, Uz., by the white band at base of wings, the entire sixth antennal joint, the coloration of antennae and body, and the smaller size ; and from *D. saltatrix*, Uz., by the white band at base of wing, the shorter intermediate antennal joints, and the coloration of body, &c.

*Type.* British Museum of Natural History.

*Hab.* CEYLON, Peradeniya, No. 47/13 (*A. Rutherford*) per the Bureau of Entomology. Reg. no. 240.

## Genus EUCHÆTOTHrips, nov.

Head not quite as long as broad, *broadest anteriorly*; *vertex broadly rounded*, with antennæ seated below; a *dorso-lateral hump or prominence behind each eye*. Maxillary palpi apparently 3-jointed. Antennæ with single-jointed style, 7-jointed.

Prothorax about as long as the head, a pair of long mid-lateral bristles as well as those at posterior angles; *antero-marginal setæ rather long*. Wings as in *Thrips* s. s. *Outer margins of all tibiæ with a pair of long outstanding slender hairs or bristles near apices and one or two, not quite so long, near middle*.

Abdomen sharply narrowed from segment 8 to apex, terminal bristles long and strong.

Nearest *Thrips* (*Bagnallia* group), but characterized at once by the italicized features in above diagnosis.

Type. *Thrips króli*, Schille.

## Genus THrips s. s.

a. *Flavus* group.*Thrips flavidus*, sp. n.

♀.—General colour, shape, and size as in *Thrips flavus*, Sch. (as described by Uzel). Antennæ about 2·5 times as long as the head; first joint white, 2 deep yellow tinged with grey; 3 lighter yellow with distal third grey-brown; 4 dark grey-brown, yellow basally; 5 dark grey-brown with basal three-fifths (0·6) sharply light yellow; 6 dark grey-brown, inclined to be yellowish basally in some specimens; style dark grey-brown. Relative lengths of segments 3 to 7 as follows:—30 : 28 : 20 : 28 : 7.

Prothorax about as long as head, more transverse than in *flavus*; setæ at hind angles shorter than in *T. flavus* (16 as to 23). Apical abdominal setæ much as in *T. flavus*, but relatively shorter.

♂.—Smaller and more slender, whitish. Antennal joint 6 with the basal two-fifths (0·4) distinctly yellow. Eighth tergite with a weakly arcuate series of long slender setæ.

Type. Hope Department of Zoology, University Museum, Oxford.

Hab. JAPAN, Kobe, June 1915 (*J. E. A. Lewis*).

b. *Physopus* group.*Thrips griseus*, sp. n.

♀.—Size and general form as in *T. physopus*.

Dark grey to grey-brown; fore-tibiæ light yellow shaded on their outer margins with grey-brown; all tarsi yellowish; fore-wings entirely grey, hind-wings lighter. Antennæ grey-brown, joint 3 yellowish and 4 brownish-yellow basally. 5 lighter at extreme base.

Head as in *T. physopus*, transverse, with cheeks widest behind eyes and thence converging to base. Ocelli rather large. Antennæ much as in *T. physopus*, but with the intermediate joints comparatively stouter; relative lengths of joints 3 to 7 approximately as follows:—20 (with stem) : 17 : 12 : 19 : 6.

Prothorax wider than and at least as long as the head, 1·7 times as broad as long; bristles at hind angles moderately long and stout, 0·45 the length of the prothorax. Legs moderately stout, hind tibiæ with a double row of six spines to apex within. Setæ on costa and veins of fore-wings as in *T. physopus*, dark.

Bristles at apex of abdomen dark, long and strong, twice as long as the segments carrying them; a short and not very strong dorsal pair on segment 9. Posterior margin of tergite 8 with a short fringe, the cilia apparently running in pairs; segment 10 divided above.

Sharply distinguished from *T. physopus* by the coloration and form of antennæ, and the colour generally.

*Type*. Hope Department of Zoology, University Museum, Oxford.

*Hab*. JAPAN, 2 ♀s, Kobe, vi. 15 (*J. E. A. Lewis*).

## Suborder TUBULIFERA.

## Family Idolothripidæ.

## Genus GIGANTOTHRIPS, Zimmermann.

1900. *Gigantothrips*, Zimmermann, Bull. de l'Inst. Bot. de Buitenzorg, No. vii.

1908. *Pimurothrips*, Bagnall, Trans. Nat. Hist. Soc. Northumberland & Durham, n. s. iii. p. 208.

*Gigantothrips gracilis*, Bagnall.

*Panurothrips gracilis*, Bagnall, *l. c.* p. 208 (1908).

This species is closely related to *Gigantothrips elegans*,

Zimm., but compared with specimens of the latter in my collection (*ex et teste* Karny), *gracilis* is larger and has the tube very noticeably longer, about 0.5 as long again as in *elegans* (18 : 12); viz., in *gracilis* about as long as the abdominal segments 7-8 together, and in *elegans* about 0.75 the length of those segments.

#### Genus ELAPHROTHRIPS, Buffa.

*Idolothrips*, Hinds, Bagnall, and others.  
*Elaphrothrips*, Buffa, Redia, v. p. 162 (1909).

#### Genus IDOLOTHRIPS, Haliday.

*Idolothrips*, Froggatt, Proc. Linn. Soc. N.S.W. 1904, pt. 1.  
*Acanthinothrips*, Bagnall, Trans. Nat. Hist. Soc. Northumberland & Durham, n. s. iii. p. 207 (1908) (and others).

Mr. Froggatt is undoubtedly right in assigning *Idolothrips marginata* and *spectrum* as ♀ and ♂ of the one species, and I withdraw anything I may have written in 1908 on that point. I do not agree with him, however, in that *I. lacertina*, Hal., is a "smaller and more variable form of the ♂" (*spectrum*). Regarding the female *marginata* as the genotype of *Idolothrips*, I erected the genus *Acanthinothrips* for the strongly characterized species *spectrum*, but being sexes of one species they must be placed in the genus *Idolothrips*, and the *Idolothrips* of most modern authors must be known as *Elaphrothrips*. The females of the two genera are very much alike.

#### *Idolothrips marginata*, Haliday.

1852. *Idolothrips marginata*, Haliday in Walker, Homopt. Ins. Brit. Mus. p. 1096.  
1852. *Idolothrips spectrum*, Haliday in Walker, Homopt. Ins. Brit. Mus. p. 1097.  
1904. *Idolothrips spectrum*, Froggatt (with *marginata* (♀) and *lacertina* as synonyms), Proc. Linn. Soc. N.S.W. pt. 1, p. 54.

*I. marginata*, being the first used, would seem to be the name by which this species should be known.

#### *Idolothrips lacertina*, Haliday.

1852. *Idolothrips lacertina*, Haliday, *l. c.* p. 1097.  
1904. *Idolothrips spectrum* (in part), Froggatt, *l. c.* pt. 1, p. 54.

The ♂, apart from being noticeably much smaller and more slender than the ♀ of *marginata*, widely and constantly



differs in the structure of the lateral abdominal processes, as may be seen by the accompanying table and rough figures.

<i>I. spectrum</i> , ♂.			<i>I. lacertina</i> , ♂.	
Process on segment	Approximate length of process.	Approximate length of spine or bristle compared with length of process.	Length of process.	Length of spine or bristle.
2 . . . .	5 times as long as breadth at apex.	<i>Spine</i> 0·3 as long.	As long as breadth at apex.	<i>Spine</i> 2·0 as long.
3 . . . .	4·5 " "	<i>Spine</i> about 0·45 as long.	About 2·0 as long.	<i>Bristle-spine</i> 3·0 as long.
4 . . . .	4 " "	Slender <i>spine</i> 0·8 as long.	About 1·5 as long.	<i>Bristle</i> 6·0 as long.
5 . . . .	3 " "	<i>Bristle</i> 3·0 as long.	As long.	<i>Bristle</i> 6·0 as long.
6 . . . .	3·5 " "	<i>Bristle</i> 2·5 as long.	Slightly longer than.	<i>Bristle</i> 6·0 as long.
7 . . . .	4 " "	<i>Spine</i> about 0·5 as long.	About 2·0 as long.	<i>Bristle</i> 4·0 as long.
8 . . . .	5·6 " "	<i>Spine</i> about 0·35 as long.	About 2·5 as long.	<i>Spine</i> about as long.

Fig. 1.

Fig. 2.

Fig. 1.—*Idolothrips marginata*, Hal., ♂.Fig. 2.—*Idolothrips lacertina*, Hal., ♂.

Left lateral processes of second (a), third (b), and eighth (c) abdominal segments.

In *lacertina* the head is shorter compared to its breadth and the genal spines are fewer, shorter, and less strong than in *marginata* ( $\sigma$ ), whilst the third antennal joint is approximately as long (compared to 1.25 times as long in *marginata*) as the length of head behind eyes. The surface-setæ of tube are, on the other hand, slightly longer and stronger compared to the breadth of the tube than in *marginata*.

I have an abundant material of these interesting insects, chiefly through Mr. Kelly's kindness, and hope in the near future to make close descriptions of the two species.

#### Family Megathripidæ.

This family will probably have to be reduced as a sub-family of *Idolothripidæ*.

#### *Megathrips quadrituberculatus* (Bagnall) \*.

1908. *Idolothrips quadrituberculatus*, Bagnall, Trans. Nat. Hist. Soc. Northumberland & Durham, n. s. iii. p. 210, pl. vii. fig. 9.

A female example sent to me by Mr. Lewis in 1912 is certainly the species I described as *Idolothrips 4-tuberculatus*; the tube is present and suggests that the species is a Megathripid. In 1915 I received a  $\sigma$  *Megathrips* which despite certain colour-differences is presumably the  $\sigma$  of the same species.

♀.—Length (including tube) 5.0 mm.

Sixth antennal joint (not described in type) with basal half yellow; 7 and 8 black. Antennæ twice as long as the head (which latter is very slightly produced beyond eyes); very slender, excepting the two basal joints; relative lengths of joints 3 to 8 as follows:—64 : 53 : 43 : 32 : 17 : 15. Joint 2 constricted near base and curved outwards.

Tube long, 1.8 as long as the head, slightly curved upwards before apex; about 6 times as long as broad near base, and with tip about 0.45 as broad as at base; sparingly furnished with fine backwardly directed setæ. Bristles at apex broken off.

♂.—Length (including tube) 4.5 mm.

A darker specimen than the ♀. Fore-tibiæ brown excepting at apex and basally; intermediate tibiæ brown except

\* In a footnote to a paper on some Japanese Thysanoptera Dr. Karny mentions eight then-known species, and refers to this as *Idolothrips tuberculatus*. I mention this error to avoid confusion, as Hood has described an *Idolothrips* under that name from U.S.A.

at apex, and hind tibiæ brown except the extreme base and distal third which are yellow. Antennæ more than twice as long as the head; relative lengths of joints 3 to 8 as follows:—61 : 50 : 45 : 33 : 16 : 14.

Abdominal segment 6 furnished with a pair of lateral spine-like tubiform processes at anterior angles, slightly outwardly directed but scarcely curved, and not quite reaching the line of the posterior margin; 8 with a pair of lateral tooth-like processes near posterior angles.

Tube about 1.5 times as long as head, stout near base but sharply constricted in the first fourth; more strongly setose (and with longer setæ) than in the ♀. Terminal hairs short.

*Hab.* JAPAN, Kobe, 1 ♀, 1912; 1 ♂, April 1915, the latter Reg. no. 139 (*J. E. A. Lewis*).

#### Family Phlæothripidæ s. l.

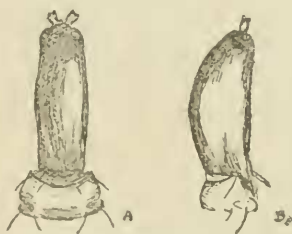
##### a. *Docessissophothrips* group.

##### *Docessissophothrips longiceps*, sp. n.

♀.—*Forma aptera*. Length about 5.5 mm.

Colour deep blackish-brown, second antennal joint reddish-brown (rest of antennæ broken off in the unique specimen); all tibiæ orange-yellow, tarsi clouded with brown.

Fig. 3.



Head and prothorax of *Docessissophothrips longiceps*, sp. n.

A. Viewed dorsally. B. Viewed laterally.

Head more than 4.5 times as long as the prothorax and 2.7 times as long as broad at middle; dorsum gently arched in profile. Eyes small, finely faceted, not prominent; post-ocular bristle apparently absent.

Fore-margin of prothorax strongly emarginate; bristles moderately long, colourless. Pterothorax short; wings absent.

Abdomen much as in *D. major*; tube long, about 0·72 the length of the head, about 5·0 times as long as broad near base, narrowed in the distal fifth, the apex being about 0·6 as wide as near base; surface sparsely and minutely setose.

At once separated from *D. major* by the length of the head, the non-prominent eyes, and the coloration of the tibiae.

*Type.* British Museum of Natural History.

*Hab.* 1 ♀, Madeira (*Wollaston*).

This makes the sixth species of the genus, each as yet known from but a single example. Ignoring *D. monstrosus*, which becomes the type of a new genus characterized below, the remaining five species fall into two well-defined groups as follows:—

1. Length 3·0 mm. or under, head shorter and broader, less than twice as long as broad; containing *ampliceps*, Bagn., and *laticeps*, Bagn.

2. Length more than 5·0 mm., head longer and 2 to 3 times as long as broad; containing *major*, Bagn., *frontalis*, Bagn., and *longiceps*, sp. n.

#### Genus EGCHIOCEPHALOTHRIPS, nov.

Separated from *Docessissophothrips*, Bagn., by the extreme form of the head which, viewed dorsally, is as figured in the original description of *D. monstrosus*. It is extraordinarily adpressed and, viewed dorsally, represents the end view of a stoutish "plate," with a slight swelling (representing the cheeks) on each side of the marked carina.

*Type.* *Docessissophothrips monstrosus*, Bagnall.

b. *Trichothrips* group.

*Edemothrips* (?) *propinquus*, sp. n.

♀.—Length 1·8 mm.

Colour brown, the last 4 or 5 abdominal segments darker. Legs yellowish shaded with light grey-brown. First antennal joint light yellowish-brown, 2 slightly darker, 3 brown with basal half clear yellow, 4 and 5 brown with basal thirds yellowish, 6 to 8 totally brown.

Almost the same as *Edemothrips* (?) *brevicollis*, Bagn. (Japan) in general form. The head is not quite so markedly convergent behind, the prothorax is not so short compared to its breadth, and the tube is stouter.

Antennæ about 2·4 times the length of the head ; relative lengths of joints 3 to 8 approximately :—31 : 29 : 28 : 24 : 19 : 14.

Prothorax about twice as broad as long ; setæ at posterior angles widely spaced, somewhat short and stout ; the outer longer than the inner, about 0·4 the length of the prothorax.

Tube short and stout, about 0·9 as long as the head ; 1·45 times as long as broad at base, and 0·45 as broad at tip as at base ; terminal bristles light coloured, about 0·7 the length of the tube.

Very closely allied to *brevicollis*, but at once recognized by the coloration of the body and the antennæ.

*Type*. Hope Department of Zoology, University Museum, Oxford.

*Hab.* AUSTRALIA, Badger Weir, Healesville, Victoria ; 1 ♀ on clover, 6. iv. 15, Reg. 120 (*R. Kelly*).

c. *Leptothrips* group.

*Gynaikothrips uzeli* (Zimmermann).

1909. *Leptothrips flavicornis*, Bagnall, Trans. Nat. Hist. Soc. Northumberland & Durham, n. s. iii. pt. 2, p. 528, pl. xiv. figs. 6-8 (from Madeira).

1909. *Phlwothrips longitubus*, Bagnall, l. c. n. s. iii. pt. 2, p. 534, pl. xiv. figs. 21 & 22 (from Java).

1910. *Leptothrips flavicornis*, Bagnall, Ann. Soc. Ent. Belg. liv. p. 464 (from *Ficus carnosus*, Madeira).

1910. *Leptothrips longitubus*, Bagnall, l. c. liv. p. 464 (rectification of generic position).

I have long been aware of the identity of the Madeiran *Leptothrips flavicornis* and the Javanese *L. longitubus* with Marchal's *Phlwothrips ficorum* from Algeria, and I was surprised that the above were not included in Hood's lengthy list of synonyms in *Insecutor Inscitiæ Menstruus* (1912, i. p. 153). I was under the mistaken impression, however, that I had published a note on the synonymy, and now rectify the omission.

d. *Haplothrips* group.

*Cephalothrips hispanicus*, sp. n.

♀.—*Forma aptera*. Length 1·3 to 1·4 mm.

Grey-brown, head and first two antennal joints chestnut-brown ; fore-femora yellowish at inner margin, fore-tibiæ

yellow clouded with grey to grey-brown basally and along outer margin; intermediate and hind tibiæ shading to yellow distally; all tarsi yellowish with brown spot. Antennal joint 3 lemon-yellow, 4 to 6 yellowish to light brownish-yellow; 7 and 8 light brown.

Head about 1.3 times as long as wide across eyes, widest just below the middle; cheeks broadly arched; eyes slightly protruding, coarsely faceted, occupying about 0.35 the total length of head and each about 0.25 the breadth. Vertex raised; ocelli large, posterior pair on a line across the anterior third of eyes; anterior ocellus forwardly directed; postocular setæ short, inconspicuous. Antennæ about 1.7 times the length of head, rather stout; joint 3 obconical, narrower than 2 or 3 to 5, 6 and 7 somewhat broadly and 7 and 8 broadly united; relative lengths of segments approximately as follows:—8 : 15 : 14 : 15 : 16 : 15 : 12 : 8. Mouth-cone reaching about 0.7 across prosternum; apex blunt; joint 1 of maxillary palpus short, about 0.2 the length of 2.

Prothorax about 0.75 the length of head and about twice as broad as long. All setæ present, colourless and therefore difficult to discern; the pair at posterior angles largest, 0.4 the length of prothorax. Pterothorax slightly broader than width across fore-coxæ, about as long as broad; wings absent; legs rather short and stout; fore-tarsus with a minute, sharp, but broad-seated tooth.

Abdomen not much broader than pterothorax; elongate; roundly narrowed from segment 7 to base of tube. Tube about as long as the prothorax, 0.65 as broad at apex as at base, sides gently and evenly narrowed from near base; terminal hairs about as long as tube, colourless except for basal third or thereabouts. Abdominal setæ on segment 9 about 0.8 the length of tube, other setæ shorter; all colourless and inconspicuous. Wing-retaining setæ on tergites 2 to 7.

Separated from *C. monilicornis* (Reuter) by the smaller size, shape, and coloration of the antennæ, and the shape and modest or normal proportions of the head. It should be noted that the *Cephalothrips yuccæ* of Hinds cannot be regarded as congeneric with *monilicornis* or *hispanicus*.

*Type.* Hope Department of Zoology, University Museum, Oxford.

*Hab.* SPAIN, Zaragoza ; 2 ♀ s collected (with other interesting *Thysanoptera*) by the well-known neuropterist, Father Navas, S.J., 8. iv. 13.

*Rhopalothrips froggatti*, sp. n.

♂.—Length about 0.75 mm.

Apterous ; short and broad.

Uniform brown, distal third of fore-tibiæ and extreme apices of intermediate and hind tibiæ yellowish-white ; tarsi yellowish marked with brown ; apex of antennal joint 2 and whole of 3 yellowish, 4 and 5 a trifle lighter brown than 6 to 8.

Head much as in *R. bicolor*, Hood, but with the outline of eyes merged in the cheeks ; scarcely wider at base (where it is widest) than long ; ocelli absent ; postocular bristles short, broad apically, apparently infundibuliform. Antennæ short and stout, about 1.7 times as long as the head, shaped as in *R. bicolor*, but joint 6 distinctly constricted at base forming a short stem.

Prothorax transverse, 0.6 as long as the head, and 2.8 times as broad as long ; all usual setæ apparently present, colourless, short, and infundibuliform. Pterothorax short, transverse, only slightly broader than the prothorax. Legs short and stout ; fore-tarsal tooth strong, sharp.

Abdomen short and broad, narrowing evenly from segment 4 to tube ; segments—especially 1 to 8—very strongly transverse ; segment 4 about 7 times and 7 about 5 times as broad as long. Tube very short, broad, 0.5 the length of the head, about 0.8 as broad at base as long and 0.6 as broad at apex as at base ; terminal hairs pointed, colourless, and about 0.6 the length of the tube. Abdominal setæ short, colourless, infundibuliform.

*Type.* Hope Department of Zoology, University Museum, Oxford.

*Hab.* AUSTRALIA, Upper Mangrove, N. S. W. ; 1 ♂ and larvæ from glands on the foliage of the black wattle (*Acacia decurrens*), Sept. 7th, 1900 (*W. W. Froggatt*).

This, the smallest described species of the suborder, is one of an interesting collection of Tubuliferous *Thysanoptera* (chiefly Gall-causers) made by Mr. Froggatt, upon which we propose to publish a joint paper ; and I have chosen to describe it now, firstly, that I may name it in Mr. Froggatt's

honour, and, secondly, on account of its general interest in the light of Mr. Reginald Kelly's \* recent paper "Observations on the Function of Acacia Leaf-glands," wherein he mentions that microscopic insects, some white (? larval) and others brown, are sometimes found in the so-called "glands."

*R. froggatti*, apart from its minuteness, may be distinguished by its very broad form, the broad intermediate antennal joints, the very short and broad prothorax and abdominal segments, and the short broad tube, &c.

*Rhopalothrips brunneus*, sp. n.

♀.—Length about 1·25 mm.

Apterous. Very like *R. froggatti*, larger and more slender. Dark black-brown, fore-tibiæ yellow near apex, other tibiæ and all tarsi as in *R. froggatti*. Antennæ with joint 3 yellow shaded with grey, 4 and 5 light brown, yellowish basally, and 6 with stem yellowish.

Head as in *P. froggatti*, about as wide as long; antennæ 1·8 times as long as the head, intermediate antennal joints not so broad compared to their length as in *froggatti*.

Prothorax 0·75 as long as the head and 2·25 times as broad as long.

Abdomen elongate, roundly narrowed from segment 7 to base of tube; segment 4 about 4·5 times and 7 about 3·8 times as broad as long. Tube about 0·75 the length of head, nearly twice as long as broad at base and about 0·5 as broad at apex as at base; terminal hairs pointed, a little more than 0·5 the length of the tube.

All setæ as in *froggatti*, but longer.

*Type*. Hope Department of Zoology, University Museum, Oxford.

*Hab*. AUSTRALIA, Victoria, on *Acacia dealbata*, 2 ♀s (*R. Kelly*).

Sharply distinguished from *froggatti* by its larger size, deeper colour, the coloration and more slender form of intermediate antennal joints, the less broad form, &c.

The coloration of both *froggatti* and *brunneus* distinguishes them from the genotype, *R. bicolor*, Hood.

\* *Vict. Nat.* xxx., Nov. 1913, pp. 121-127.